

# Compact Pressure Switch

## Series **ZSE2**

(For vacuum)

## **ISE2**

(For positive pressure)

For General Pneumatics



Can be integrated with ZX or ZR vacuum system.

### Quick response

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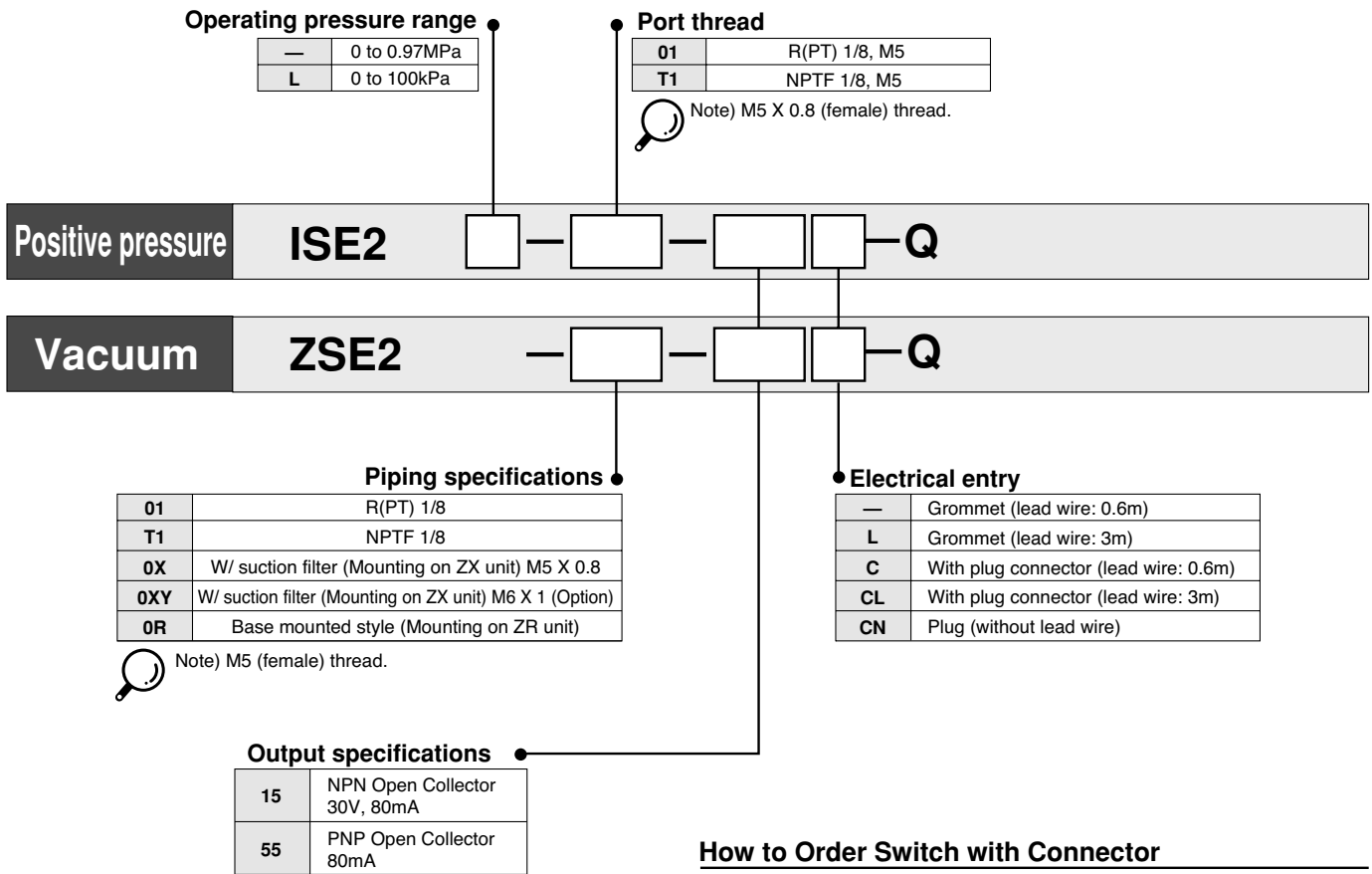
10mS

### Easy and simple wiring

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Connector style

## How to Order



## How to Order Switch with Connector

• Without lead wire (Connector 1 pc., Socket 3 pcs.) ..... **ZS-10-A**

• With lead wire ..... **ZS-10-5A-** [ ]

Note) When ordering switch with 5m long lead wire, indicate both part numbers.

**Lead wire length**

|    |      |
|----|------|
| —  | 0.6m |
| 30 | 3m   |
| 50 | 5m   |

Ex.) ZSE2-01-15CN ..... **1 pc.**  
ZS-10-5A-50 ..... **1 pc.**

## ⚠ Caution

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.3.0-7 to 3.0-9 for precautions on every series.

## Specifications

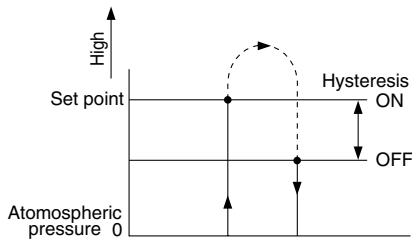
| Model                       | ZSE2  | ISE2L   | ISE2      |
|-----------------------------|---|---|-----------|
| Operating pressure range    | −101kPa to 0  | 0 to 100kPa   | 0 to 1MPa |
| Max. pressure               | 200kPa  |   | 1MPa      |
| Accuracy                    | ±3% F.S. (5 to 40°C), ±5% F.S. (0 to 60°C)  |   |           |
| Hysteresis                  | 3% F.S. or less (Fixed)   |   |           |
| Power supply                | 12 to 24V DC (Ripple ± 10% or less)   |   |           |
| Output                      | −15: NPN Open collector 30V 80mA, −55: PNP Open collector 80mA  |   |           |
| Indicator light             | ON: When output is ON(Red)  |   |           |
| Current consumption         | 17mA or less at 24V DC  |   |           |
| Operating temperature range | 0 to 60°C (No condensation)   |   |           |
| Port size                   | 01: R(PT) 1/8, M5 T1: NPTF1/8, M5<br>0X: With suction filter (For mounting on ZX unit) 0R: Base mounted style (For mounting on ZR unit) |   |           |
| Lead wire                   | Grommet   | Grommet oil-resistant vinyl cabtire code 3 wires ø3.4, 0.2mm <sup>2</sup> |           |
|                             | Plug connector  | Heat-resistant vinyl electrical wire ø1.55, 0.31mm <sup>2</sup>           |           |

\* In case of vacuum use, there is no influence on the switch if 0.5MPa of pressure is supplied instantly.

# ZSE2/ISE2

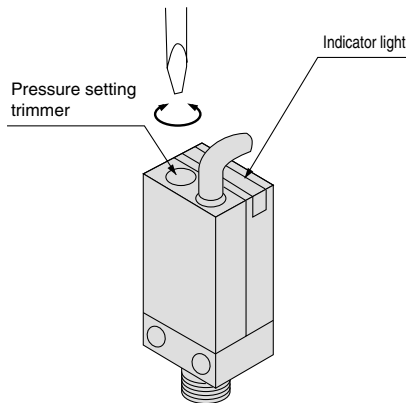
## Hysteresis

Hysteresis is the pressure difference between the ON pressure and the OFF pressure of the output signal. The set pressure is the pressure selected to switch from OFF to ON condition.

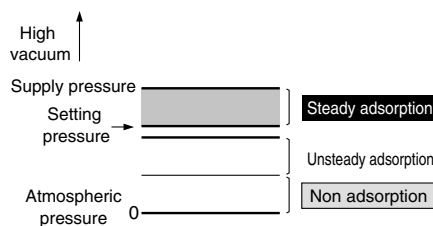


## How to Set Pressure

- Rotate SET potentiometer (trimmer) clockwise to increase (high vacuum pressure) the ON point.



- Set the possible min. pressure for adsorption confirmation. If setting the pressure lower than that, switch becomes ON in case that adsorption is not completely done. If setting the pressure higher than that, switch does not become ON even though it may absorb workpieces.



## ● Regarding the pressure setting

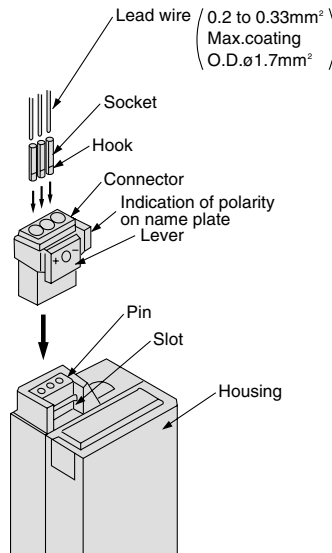
### ⚠ Caution

Observe the following precautions for setting the vacuum pressure: Use your fingertips to gently turn the screwdriver. Do not use a screwdriver with a large grip or with a tip that does not fit into the trimmer groove because this could strip the groove.

## How to Use Connector

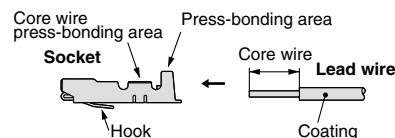
### ① Connection

- When assembling the connector to the switch housing, push the connector straight onto the pins until the lever locks into the housing slot.
- When removing the connector from the switch housing, push the lever down to unlock it from the slot and then withdraw the connector straight off of the pin.



### ② Press bonding socket to lead wire.

- Strip the end of the lead wire 3.2 to 3.7mm long.
- Put wire into socket taking care to prevent the lead wire insulation from entering the core wire pressure bonding area.
- Press bond using press-bonding tool. Part No. DXT170-75-1.



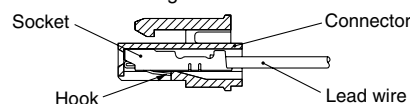
### ③ Assembly of socket to connector

#### ● Assembling

Push socket into the hole in the connector until the hook of the socket locks into the connector. (The socket hook will spring open inside the connector) Gently pull lead wire back to confirm that socket is locked in position.

#### ● Disassembling

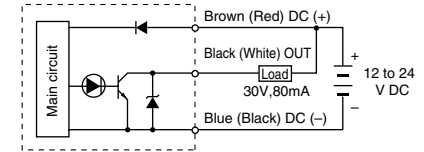
When disassembling socket from connector, push the hook of the socket down with a small dia. instrument. Pull socket out by means of the lead wire. If the socket is to be re-used, bend hook of the socket out to its original position before reassembling.



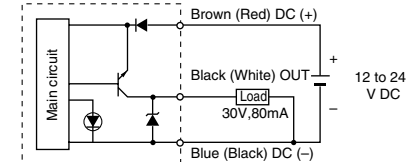
## Internal Circuit and Wiring

Lead wire colors inside ( ) are those prior to conformity with IEC standards.

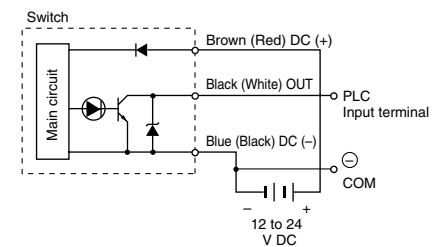
### "-15" NPN Open Collector



### "-55" PNP Open Collector



### Connection with Sequence Controller at "-" Common Terminal



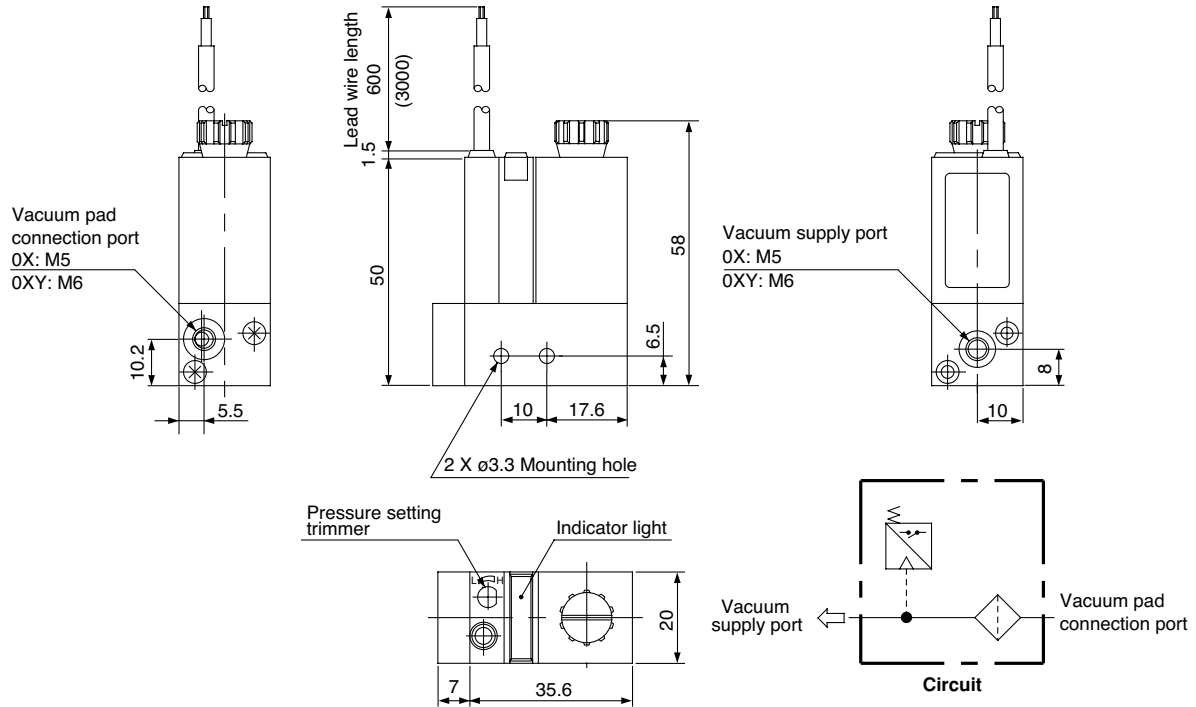
### ● Filter case

#### ⚠ Caution

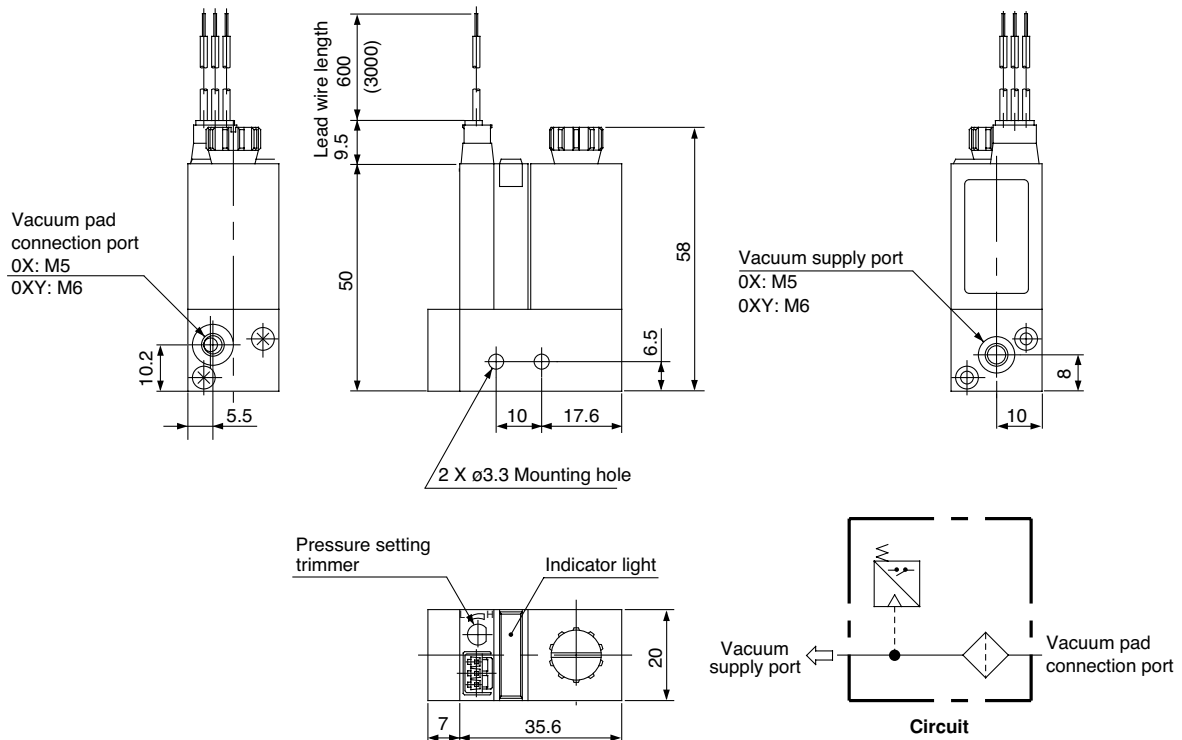
- ① Do not use with thinner, carbon tetrachloride, chloroform, acetate, aniline, cyclohexane, trichloroethylene, sulfuric acid, lactic acid and watermiscible cutting fluid (alkaline).
- ② Keep out of the direct rays of the sun.

## Dimensions/With Suction Filter: ZSE2-0X□

### Grommet style/ZSE2-0X□-15



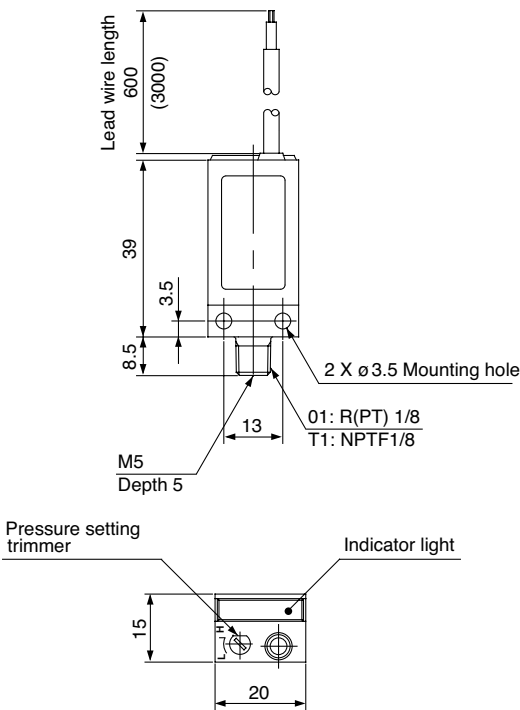
### Connector style/ZSE2-0X□-15C



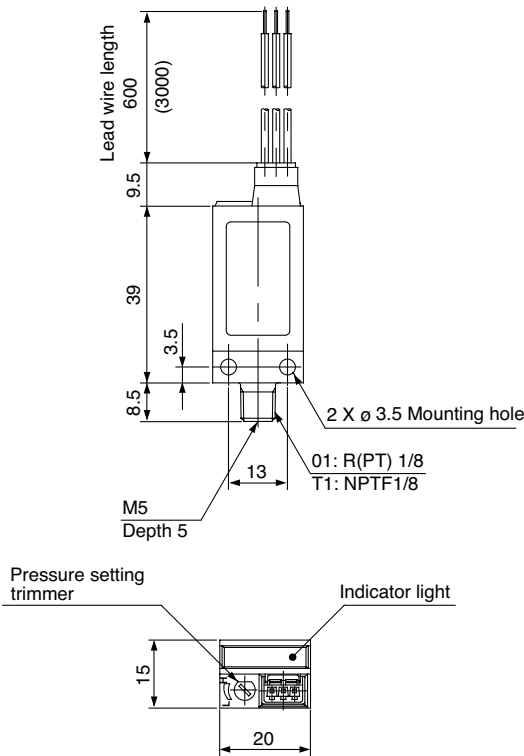
# ZSE2/ISE2

## Dimensions/Standard: ZSE2-<sup>01</sup><sub>T1</sub>

Grommet style/ZSE2-<sup>01</sup><sub>T1</sub>-15

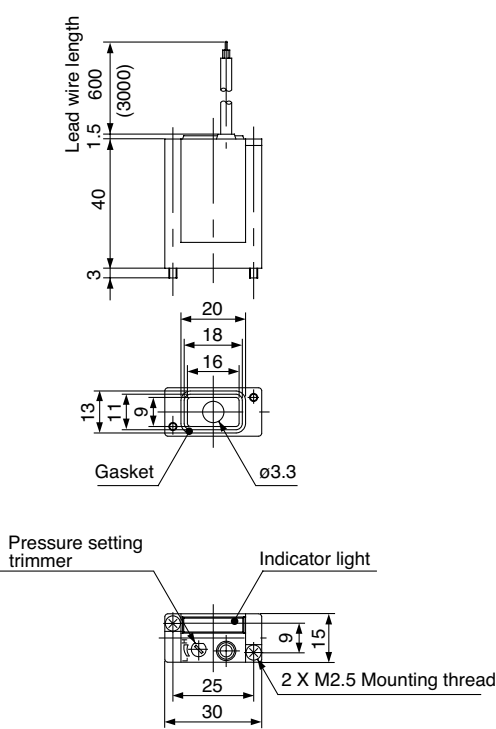


Connector style/ZSE2-<sup>01</sup><sub>T1</sub>-15C

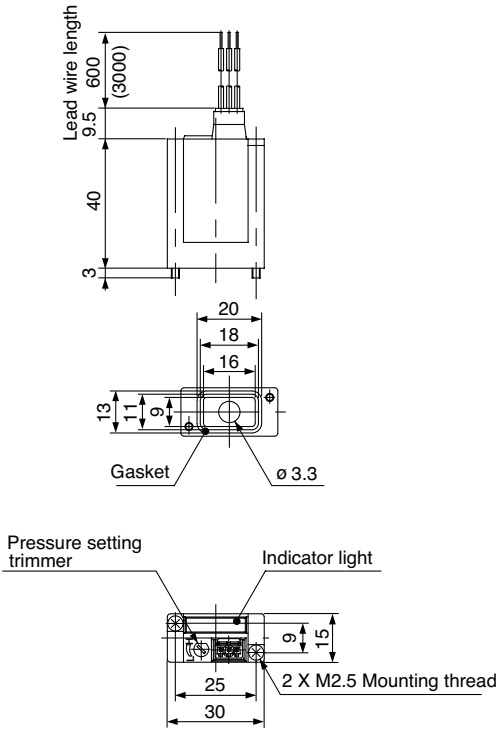


## Dimensions/Base Mounted Style: ZSE2-0R

Grommet style/ZSE2-0R-15

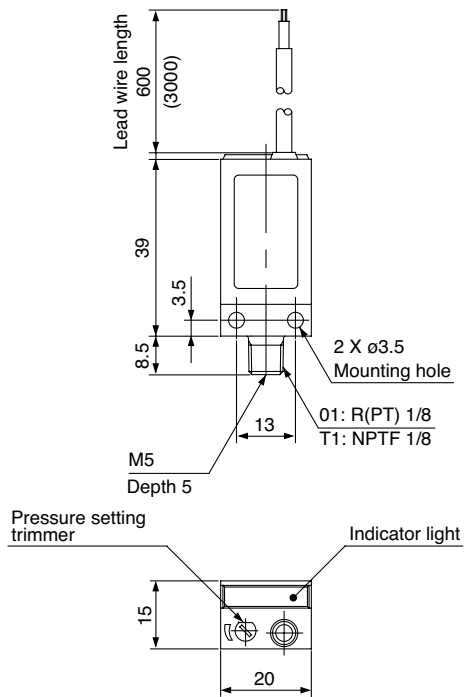


Connector style/ZSE2-0R-15C



## Dimensions/ISE2□-<sup>01</sup><sub>T1</sub>

**Grommet style/ISE2□-<sup>01</sup><sub>T1</sub>-15**



**Connector style/ISE2□-<sup>01</sup><sub>T1</sub>-15C**

